

REMARKS

Claims 38-43, 45 and 50-55 stand rejected in the present application, while claims 1-37, 44 and 46-49 were previously cancelled. New claims 56-58 are being added. Therefore, claims 38-43, 45 and 50-58 will be pending following entry of this amendment.

Many of the claims are being amended to use the term "cell" in place of the word "section" so that the terminology corresponds with that of the Detailed Description of the Invention. This voluntary amendment is not necessitated by patentability issues but is done merely to better define what the application consider as his invention.

Rejection Under 35 U.S.C. §112

Claims 50 and 55 were rejected under the first paragraph of 35 U.S.C. §102 because they state that the sections of the tank are divided into cells by walls; whereas the Detailed Description of the Invention describes the cells being divided into sections. This rejection has been rendered moot by amending both these claims to recite cells instead of sections. Claims 50 and 55 now state that the cells are formed by dividing the tank with walls.

Rejections Under 35 U.S.C. §102

Claims 38, 39 41, 42, 43, 45, 50 and 51 were rejected under 35 U.S.C. §102 as being anticipated by Nelles (U.S. Patent No. 4,815,368).

The present invention relates to a method for cooling blocks of cheese which are placed sequentially into different cells of a tank that are arranged horizontally with respect to each other. Claim 38 states that liquid is introduced into the cell that contains cheese blocks that have been in the tank substantially the greatest amount of time. The liquid then is successively transferred horizontally from cell to cell going from a cell that contains

cheese blocks which have been in the tank for a longer time than the cheese in the cell that receives the liquid. In other words the liquid flows horizontally in the tank from cooler cheese to warmer cheese which is precisely how the transfer is described in independent claim 42.

The Nelles device does not flow liquid through a tank horizontally from cell to horizontal cell based on the amount of time that cheese has been in each cell or based on the temperature of the cheese in the cells. As shown in Figure 1 of the reference, cooled brine flows from a supply pipe 32 through nozzles 33, 34 and 35 simultaneously into different horizontal locations at the entire bottom of a tank 1. Upon exiting the nozzles, the brine flows upward through the tank (column 5, line 63 – column 6, line 7). The brine also flows horizontally from each cage into the discharge canal 11 as indicated by the arrows 98 and through that discharge canal and an overflow weir 23 into a reservoir 21 from which a pump forces the liquid back into the supply pipe 32 (column 5, lines 29-38). Although the undivided tank has a plurality of cages 15 (Figure 2), each with an number of shelves 63 (Figure 6), the patent teaches a uniform flow of fluid through the tank to maintain the brine at a constant temperature and concentration at all times and locations in the tank (column 3, line 67 - column 4, line 3).

Although the vertical flow in Nelles may be from the coolest to the warmest cheese in each cage, nothing in the patent suggests flowing liquid horizontally through different cells from the one containing the cheese that has been in the tank the greatest amount of time to that which has been in the tank the least amount of time. Nor is horizontal flow from cell to cell based on cheese temperature suggested. In fact, the various nozzles 33-35 introduce the brine uniformly across the bottom of all the cages and there is no mechanism for ensuring

that the brine flows horizontally in the claimed sequence. Thus very warm cheese in one cage horizontally adjacent cooler cheese in another cage can affect the cooling process in the patent. Therefore, the Nelles system does not achieve the optimal cooling as stated in the last paragraph on page 22 of the present application.

Note the claim 41 specifies that after being transferred from cell to cell, liquid is removed from the tank at the horizontally arranged cell the contains cheese blocks that have been in the tank substantially the least amount of time. That is not necessarily true in Nelles and any such occurrence is pure happenstance. Note that the liquid is always removed from top the tank across the entire side abutting the discharge canal 11, see Nelles Figure 1. That fixed flow pattern does not take into account either the holding time or the temperature of the cheese in the tank section adjacent the discharge canal 11.

Claims 38-43, 45, 50-53 have been rejected under 35 U.S.C. §102 as anticipated by Nelles, as evidenced by Woods.

The same distinctions stated above with respect to the Nelles patent apply to this ground of rejection and are incorporated by reference.

Woods, which describes a desk, is cited as teaching “shelves that are substantially horizontal with respect to the floor.” A desk with horizontal shelves stacked vertically is irrelevant to both present invention and the Nelles cheese cooler. The present claims specify that the cells are arranged horizontally with respect to each other, not to a floor.

Even considering the desk in Woods, there still is nothing in the prior art which suggests transferring liquid horizontally from cheese cooling cell to cheese cooling cell based on either (1) the length of time the cheese has been in each cell, or (2) the temperature

of the cheese in those cooling cells. In fact, the Johnson patent cited in the previous Office Action teaches that the common practice was to use the opposite horizontal liquid flow.

Therefore, although Nelles teaches flowing cooling liquid vertically through the tank from shelf to shelf, that does not anticipate the present invention which relates to flowing liquid horizontally in the specific claimed manner for improved cooling.

The New Claims

New claims 56-58 recite that the each wall, which divides the tank into a plurality of cells, extends from one side wall to the opposite sidewall of the tank. Note that in Figure 1 of the present application, walls 43 extend entirely between the opposing sidewalls of the tank 19. This is in contrast to the elements 64 and 67 of the Nelles rack shelves 63 which the Office Action alleges correspond to the claims cell walls and which are remotely spaced from the tank sidewalls. The desk in the Woods reference does not have a tank, much less cooling cells defined therein. Therefore, the subject matter of claims 56-58 is neither anticipated nor rendered obvious by the art of record.

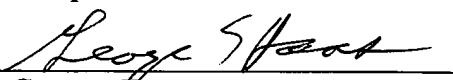
Conclusion

In view of these distinctions between the amended claims and teachings of the cited patents, reconsideration and allowance of the present application are requested.

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